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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/711,644

09/29/2004

Wei Lu

FIS920040037US1

5643

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03/10/2006

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EXAMINER

YANTORNO, JENNIFER M

ART UNIT

PAPER NUMBER

2881

DATE MAILED: 03/10/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/711,644	Applicant(s) LU, WEI	
	Examiner Jennifer Yantorno	Art Unit 2881	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 13 February 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-16 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-16 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-5, 8-13, and 16 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Chang et al. (US 6,646,259 B2).

Regarding claims 1, 2, and 9, '259 teaches a method for preparing a specimen for application of microanalysis thereto comprising forming an initial conductive layer over only a localized area of interest without blanket coverage of said initial conductive layer on the entire surface, removing a volume of material surrounding the area of interest by forming a pair of trenches in a bulk material shave the area of interest formed thereon, thereby forming a membrane including the area of interest sand the initial conductive layer over the area interest, and removing the membrane from the substrate material (Col. 3, ll. 23-33, Col. 4, ll. 7-17). '259 teaches that the method of forming the conductive layer is a DC sputtering process performed via an ion miller (Col. 3, ll30-33 and ll. 58-60), not low-energy electron beam deposition, but it is notoriously known that these two application methods are analogous in the art.

Regarding claims 3 and 11, '259 teaches that the conductive later is made of platinum (Col. 3, ll. 26-30).

Regarding claims 4 and 12, '259 teaches that the conductive layer is formed at a thickness of up to 20 nm (Col 3, ll. 41-43).

Regarding claims 5 and 13, '259 teaches that the conductive layer is form over an area of about 1 micron by about 10 microns (Col 4, ll. 7-12).

Regarding claims 8 and 16, '259 teaches removing a volume of material surrounding the area of interest is implemented by FIB milling (Col. 4, ll. 7-12)

Regarding claim 10, '259 teaches that the microanalysis comprises tunneling electron microscopy (Col. 4, ll. 7-12).

Claims 6, 7, 14, and 15 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Chang et al. (US 6,646,259 B2), in view of Engelmann et al. (US 6,303,399 B1).

Regarding claims 6, 7, 14, and 15, the aforementioned prior art meets all claim limitation with the exception of implementing high-energy ion beam deposition for thickening the initial conductive layer. '399 teaches implementing high-energy ion beam deposition for the conductive layer (Col. 5, ll. 55-59). It would have been obvious to one skilled in the art at the time of the invention to implementing high-energy ion beam deposition for thickening the initial conductive layer as this method is notoriously known in the art.

Response to Arguments

Applicant's arguments filed 2/13/2006 have been fully considered but they are not persuasive. Applicant argues that Chang et al. do not teach localized formation of a conductive layer, but that Chang teaches blanket coverage. However, Chang et al.

Art Unit: 2881

teach forming a conductive layer via an ion miller, which is analogous in the art to low-energy electron beam deposition. Additionally, applicant argues that the conductive layer formed by Chang is a blanket layer. It would not make sense to assume that Chang coats the entire substrate via an ion miller, but instead only a sample specimen area approximately 10 x 5 x 0.2 microns. Finally, applicant argues that there is no motivation in the Chang reference to form a localized conductive layer. However, there is also no motivation in the Chang reference to form a blanket conductive layer.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

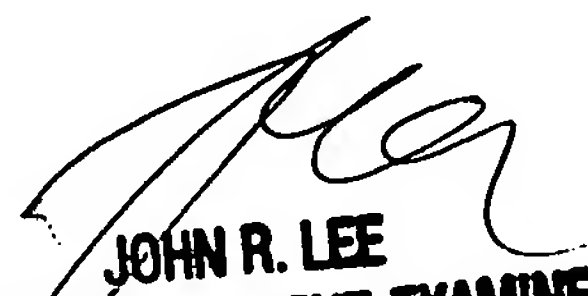
A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jennifer Yantorno whose telephone number is (571) 272-5918. The examiner can normally be reached on Monday-Friday, 9 am - 5 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Lee can be reached on (571) 272-2477. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

JY


JOHN R. LEE
SUPERVISORY PATENT EXAMINER
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